

# APPENDIX F

## PEST MANAGEMENT

<b>TABLE F-1</b> <b>NOXIOUS WEEDS/PLANT PESTS</b> <b>NAVAJO RESERVOIR AREA AND VICINITY</b>			
Weed	State or County Listed	Present on Reservoir Area	Comments
African Rue ( <i>Perganum harmala</i> )	Yes	Maybe	<ul style="list-style-type: none"> <li>NM Class B noxious weed- control spread statewide</li> <li>CO Class A noxious weed- statewide eradication</li> <li>&lt;1 acre present on public lands along Navajo dam highway (FFO Invasive Weed Management Plan)</li> </ul>
Black Henbane ( <i>Hyoscyamus niger</i> )	Yes	Maybe	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class A noxious weed- halt spread statewide</li> <li>About 3 acres on public lands on Middle Mesa (FFO Invasive Weed Management Plan)</li> </ul>
Bull Thistle ( <i>Cirsium vulgare</i> )	Yes	Likely	<ul style="list-style-type: none"> <li>NM Class B noxious weed- control spread statewide</li> <li>CO Class A noxious weed- statewide eradication</li> <li>Present throughout FFO.</li> </ul>
Canada Thistle ( <i>Cirsium arvense</i> )	Yes	Yes	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>High priority for initiation of monitoring and control efforts.</li> <li>Present at Hammond Mitigation site; targeted for control.</li> <li>About 3 acres on public lands within FFO</li> </ul>
Curlycup gumweed ( <i>Grindelia squarrosa</i> )	Unknown	Yes	<ul style="list-style-type: none"> <li>Present at Hammond Mitigation site; targeted for control.</li> </ul>
Dalmatian toadflax ( <i>Linaria genisitifolia</i> spp. <i>dalmatica</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>Present in SW Colorado</li> </ul>
Diffuse knapweed ( <i>Centaurea diffusa</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>On public lands in SW Colorado (FFO Invasive Weed Management Plan)</li> </ul>
Dyer's Woad ( <i>Isatis tinctoria</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class A noxious weed- statewide eradication</li> </ul>
Eurasian milfoil ( <i>Myriophyllum spicatum</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> </ul>
Field bindweed ( <i>Convolvulus arvensis</i> L.)	Yes	Yes	<ul style="list-style-type: none"> <li>NM Class C noxious weed- local level management and control</li> <li>CO Class C noxious weed- improve management statewide</li> </ul>
Halogeton ( <i>Halogeton glomeratus</i> )	Yes	Likely	<ul style="list-style-type: none"> <li>NM Class B noxious weed- control spread statewide</li> <li>CO Class C noxious weed- improve management statewide</li> </ul>
Hoary Cress; aka Whitetop ( <i>Carydaria draba</i> )	Yes	Likely	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>Present throughout FFO and in SW Colorado</li> </ul>
Houndstongue ( <i>Cynoglossum officinale</i> L.)	Yes	Unknown	<ul style="list-style-type: none"> <li>CO Class B noxious weed- halt spread statewide</li> </ul>

<b>TABLE F-1</b> <b>NOXIOUS WEEDS/PLANT PESTS</b> <b>NAVAJO RESERVOIR AREA AND VICINITY</b>			
Weed	State or County Listed	Present on Reservoir Area	Comments
Hydrilla ( <i>Hydrilla verticillata</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class A noxious weed- statewide eradication</li> </ul>
Jointed goatgrass ( <i>Aegilops cylindrica</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class C noxious weed- local level management and control</li> <li>CO Class C noxious weed- improve management statewide</li> </ul>
Leafy spurge ( <i>Euphorbia esula</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>High priority for initiation of control and monitoring efforts.</li> <li>SUTT found and controlled a small population near Allison, CO in 2002.</li> <li>Should monitor Sambrito Creek and Los Pinos River areas for presence.</li> <li>About 5 acres on public lands on Middle Mesa; within a half mile of the Reese Canyon RNA boundary (FFO Invasive Weed Management Plan)</li> </ul>
Musk thistle ( <i>Carduus nutans</i> )	Yes	Yes	<ul style="list-style-type: none"> <li>NM Class B noxious weed- control spread statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>Present along San Juan River below dam.</li> <li>Present at Hammond Mitigation site; targeted for control there.</li> <li>Present throughout FFO</li> </ul>
Oxeye Daisy ( <i>Chrysanthemum leucanthemum</i> L.)	Yes	Unknown	<ul style="list-style-type: none"> <li>CO Class B noxious weed- halt spread statewide</li> </ul>
Perennial Pepperweed; aka Tall whitetop ( <i>Lepidium latifolium</i> )	Yes	Maybe	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>May be present in Sambrito Wetlands Area (CO).</li> </ul>
Plumeless thistle ( <i>Carduus acanthoides</i> L.)	Yes	Unknown	<ul style="list-style-type: none"> <li>CO Class B noxious weed- halt spread statewide</li> </ul>
Poison Hemlock; aka Water Hemlock ( <i>Conium maculatum</i> L.)	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class B noxious weed- control spread statewide</li> <li>CO Class C noxious weed- improve management statewide</li> </ul>
Purple loosestrife ( <i>Lythrum salicaria</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class A noxious weed- statewide eradication</li> </ul>
Russian knapweed ( <i>Acroptilon repens</i> )	Yes	Yes	<ul style="list-style-type: none"> <li>NM Class B noxious weed- control spread statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>High priority for initiation of monitoring and control efforts.</li> <li>Several large populations on Miller Mesa, NM</li> <li>Present within Navajo Lake State Park.</li> <li>About 30 acres present on public lands within FFO (FFO Invasive Weed Management Plan)</li> </ul>
Russian olive ( <i>Elaeagnus angustifolium</i> L.)	Yes	Yes	<ul style="list-style-type: none"> <li>CO Class B noxious weed- halt spread statewide</li> <li>Moderate priority for initiation of control and monitoring efforts.</li> <li>Classed as a noxious weed in Colorado in 2002.</li> <li>Present at scattered locations along San Juan River from Navajo Dam downstream.</li> <li>Present within the riparian zone on the river arms.</li> <li>Previously used in landscaping at Arboles, Pine, and Sims Mesa Recreation Areas; consider phased removal from developed recreation areas.</li> <li>Consider phased removal from riparian areas to prevent adverse effect to SWWF.</li> <li>Do not use for future landscape or wildlife plantings.</li> <li>Present throughout FFO.</li> </ul>
Scotch thistle ( <i>Onopordum acanthium</i> )	Yes	Maybe	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>About 3+ acres present on public lands within north half of FFO</li> </ul>
Siberian Elm ( <i>Ulmus pumila</i> )	Yes	Likely	<ul style="list-style-type: none"> <li>NM Class C noxious weed- local level management and control</li> </ul>

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Weed	State or County Listed	Present on Reservoir Area	Comments
Spotted knapweed ( <i>Centaurea maculosa</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>CO Class B noxious weed- halt spread statewide</li> <li>High priority for initiation of monitoring and control efforts.</li> <li>&lt;1 acre on public lands- La Plata and SW Colorado</li> </ul>
Tamarisk; aka Salt Cedar ( <i>Tamarix</i> sp.)	Yes	Yes	<ul style="list-style-type: none"> <li>NM Class C noxious weed- local level management and control</li> <li>CO Class B noxious weed- halt spread statewide</li> <li>High priority for initiation of control and monitoring efforts.</li> <li>The State of Colorado has set a high priority on tamarisk eradication within the state.</li> <li>Consider phased control efforts with prompt revegetation of native plants to minimize potential impacts to SWWFC.</li> <li>Present at scattered locations along San Juan River from Navajo Dam downstream.</li> <li>Heavy infestation within reservoir basin east of Windsurf Beach area(CO); a portion of the infestation likely to be drowned out when high water returns.</li> <li>Present throughout FFO</li> </ul>
Yellow Starthistle ( <i>Centaurea solstitialis</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class A noxious weed- statewide eradication</li> </ul>
Yellow toadflax ( <i>Linaria vulgaris</i> )	Yes	Unknown	<ul style="list-style-type: none"> <li>NM Class A noxious weed- prevent and eradicate statewide</li> <li>CO Class B noxious weed- halt spread statewide</li> </ul>

(1) Counties: LP= La Plata (CO); AR= Archuleta (CO); SJ= San Juan (NM); RA= Rio Arriba (NM)

<b>TABLE F-2 NON-PLANT PESTS NAVAJO RESERVOIR AREA</b>			
<b>Pest</b>	<b>Present</b>	<b>Potential Effects</b>	<b>Comments</b>
Zebra Mussel	Unknown but Not Likely	<ul style="list-style-type: none"> <li>▪ Clogging of water pipes and control structures.</li> <li>▪ Loss of very small aquatic species in food chain.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Easy boating access throughout the country increases chance of spread to currently unaffected areas.</li> <li>▪ Continue public education and information campaign to reduce spread.</li> <li>▪ Periodically monitor for presence.</li> <li>▪ Take prompt control actions if discovered.</li> </ul>
New Zealand Mud Snail	Unknown but Not Likely	<ul style="list-style-type: none"> <li>▪ Loss of native macroinvertebrates in streams</li> <li>▪ Loss of or reduction in stream trout fisheries</li> </ul>	<ul style="list-style-type: none"> <li>▪ Easy trout fishing access throughout the globe increases chance of spread to currently unaffected areas.</li> <li>▪ Continue public education and information campaign to reduce spread.</li> <li>▪ Periodically monitor for presence.</li> <li>▪ Take prompt control actions if discovered.</li> </ul>
Beaver	Yes	<ul style="list-style-type: none"> <li>▪ Excessive loss of preferred native riparian trees and shrubs.</li> <li>▪ Plugging of culverts and ditches.</li> <li>▪ Flooding of areas.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Good, natural wetlands and riparian engineer. Where appropriate, their presence and activities should be encouraged.</li> <li>▪ Take steps to prevent excessive loss of high value native riparian trees and shrubs through fencing or other non-lethal means.</li> <li>▪ Live trap and relocate beaver from areas where their activities are unacceptable.</li> <li>▪ Use engineered structures to reduce beaver impacts to water control and management structures such as culverts and ditches.</li> <li>▪ Consider lethal control measures, as appropriate.</li> </ul>
Prairie Dog	Yes	<ul style="list-style-type: none"> <li>▪ Public health- bubonic plague.</li> <li>▪ Loss of grass and herbaceous vegetative cover</li> <li>▪ May provide burrowing owl habitat</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider control efforts on case-by-case basis in developed recreational areas</li> <li>▪ Protect burrowing owls during any prairie dog control efforts</li> </ul>
Ground Squirrels	Yes	<ul style="list-style-type: none"> <li>▪ Burrowing in earthen dams with possible subsequent dam failure.</li> <li>▪ May provide burrowing owl habitat;</li> </ul>	<ul style="list-style-type: none"> <li>▪ Take necessary case-by-case efforts to control populations that may adversely affect project features.</li> <li>▪ Protect burrowing owls during any ground squirrel control efforts</li> </ul>
Muskrat	Yes	<ul style="list-style-type: none"> <li>▪ Burrowing in earthen dams with possible subsequent dam failure.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Take necessary case-by-case efforts to control populations that may adversely affect project features.</li> </ul>
Mosquitoes	Yes	<ul style="list-style-type: none"> <li>▪ Public Health- vectors for various diseases (West Nile virus, encephalitis, etc.)</li> <li>▪ Subsequent infection and possible death of humans, birds and horses.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Encourage the presence of native, natural control agents, such as birds, bats, etc., throughout the reservoir area.</li> <li>▪ Implement integrated control efforts in developed recreational areas</li> <li>▪ Consider minimizing the use of toxic chemical control methods</li> <li>▪ Coordinate public information and education with State and local health departments</li> </ul>